

Claims

1. A process for the production of a dimeric, biologically active Transforming Growth Factor type β (TGF- β)-like protein, comprising treating the denatured monomeric form of said TGF- β -like protein with a detergent-free buffer comprising an organic solvent selected from the group consisting of DMSO, DMSO₂, DMF, and any mixture of two or three members of the group consisting of DMSO, DMSO₂ and DMF.
2. The process according to claim 1 in which the buffer additionally contains a reducing substance.
3. The process according to claim 1 or 2 in which the organic solvent is selected from the group consisting of DMSO, DMF and any mixture thereof.
4. The process according to claim 1 or 2 in which organic solvent is used in a concentration of about 10 to about 50%.
5. The process according to claim 1 or 2 in which organic solvent is used in a concentration of about 20 to about 50 %
6. The process according to claim 1 or 2 in which organic solvent is used in a concentration of about 30 to about 50%
7. The process according to claim 1 or 2 in which organic solvent is used in a concentration of about 30 % to about 40 %.
8. The process according to claim 1 or 2 in which organic solvent is used in a concentration of about 40 %.
9. The process according to claim 1 or 2 in which the TGF- β -like protein is selected from the group consisting of TGF- β 1, TGF- β 2, TGF- β 3, heterodimeric TGF- β s, fragments and mutants of a TGF- β including hybrid molecules in which parts of different TGF- β s are exchanged, BMPs, inhibins and activins.

10. The process according to claim 1 or 2 in which the TGF- β -like protein is selected from the group consisting of TGF- β 2, TGF- β 3, hybrid TGF- β 1-2, hybrid TGF- β 1-3, hybrid TGF- β 2-3, hybrid TGF- β 3-2, and BMP-2.
11. The process according to claim 10 in which the TGF- β -like protein is TGF- β 3.
12. The process according to any of claims 1 or 2 in which the buffer has a pH of about 6 to about 10.
13. The process according to any of claims 1 or 2 in which the buffer has a temperature of about 0°C to about 40°C.
14. The process according to claim 2 in which the reducing substance is a reduced sulfhydryl compound.
15. The process according to claim 2 in which the reduced sulfhydryl compound is selected from the group consisting of glutathione in its reduced form, β -mercaptoethanol in its reduced form, mercaptomethanol in its reduced form, cysteine, cysteamine, and dithiothreitol in its reduced form.
16. The process according to claim 2 in which the reduced sulfhydryl compound is used in a concentration of about 1 to 100 mM.
17. The process according to claim 2 in which the reduced sulfhydryl compound is used in a concentration of about 1 to 10 mM.
18. The process according to claim 2 in which the reduced sulfhydryl compound is used in a concentration of about 2.5 mM.